

Notice of Allowability

Application No.

10/785,441

Examiner

Nikita Wells

Applicant(s)

WILLOUGHBY ET AL.

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed 23 February 2004.
2. ☒ The allowed claim(s) is/are 1-36.
3. ☒ The drawings filed on 23 February 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Nikita Wells
Primary Examiner
Art Unit: 2881

Detailed Action

Allowable Subject Matter

1. Claims 1-36 are allowed.
2. The following is an examiner's statement of reasons for allowance:

With respect to the independent claims 1, 10, 19, 27, and 33, prior art fails to disclose or make obvious, in combination with other recited features of the claim limitations, an ion or charged particle transmission device at or near atmospheric pressure for delivery of charged material to a deposition or reaction surface, said device comprising: a) a near atmospheric pressure ion or charged particle source; b) a high transmission electrode surface that controls the passage efficiency and spatial distribution of said charged material through said surface and into an ion beam creation optics region, or funnel-well focusing region; c) optics in said ion beam creation region, or funnel-well focusing region, with associated power supplies to generate a collimated beam of charged material; d) a material collection surface held at or near atmospheric pressure at a lower electrical potential than said ion source and said high transmission electrode to enable attraction and deposition to said collection surface; whereby, the delivery of said charged material from said source has precisely controlled spatial distribution, temporal deposition, composition, and energy. The unique aspect of the invention lies in the use of a high transmission electrode surface that controls the passage efficiency and spatial distribution of the charged material through said surface and into an ion beam creation optics region.

The dependent claims 2-9, 11-18, 20-26, 28-32, and 34-36, are allowable by virtue of their dependence upon the independent claims 1, 10, 19, 27, and 33, respectively.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Both Sheehan et al. (6,744,041 B2) and Willoughby et al. (6,784,424 B1) disclose the collection and focusing of ions generated from atmospheric pressure ion sources using a high transmission electrode surface element. Whitehouse et al. (6,683,301 B2) disclose the collection and focusing of ions in a time-of-flight mass spectrometer configured with a potential well for ions in the pulsing region with an HF electric field created in a space proximate to a surface.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikita Wells whose telephone number is (571) 272-2484. The examiner can normally be reached on 8:30 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571) 272-2477. The central fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Nikita Wells", is positioned above the printed name and title.

Nikita Wells, Primary Examiner
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November 4, 2004